

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

STEVEN D. CRAWFORD,	:	
	:	
Plaintiff,	:	No. 1: CV-03-0693
	:	
v.	:	
	:	
COUNTY OF DAUPHIN,	:	
CITY OF HARRISBURG,	:	
JANICE ROADCAP, JOHN C.	:	(Judge McClure)
BALSHY and WALTON	:	
DEWEY SIMPSON, JR.,	:	
ADMINISTRATOR OF THE	:	
ESTATE OF WALTER D.	:	
SIMPSON,	:	
	:	
Defendants	:	

O R D E R

April 4, 2006

BACKGROUND:

On March 28, 2003, plaintiff filed a complaint in the Court of Common Pleas of Dauphin County at docket number 2003-CV-1452. Shortly thereafter the matter was removed to the Middle District of Pennsylvania. On October 6, 2005, the court granted defendant City of Harrisburg's motion for summary judgment and denied the other defendants' motions for summary judgment. Upon a motion for reconsideration, on January 19, 2006, the court granted defendant County of

Dauphin's motion for summary judgment. The matter is currently scheduled for this court's April 2006 trial list.

On January 9, 2006, plaintiff filed a motion in limine to preclude the expert testimony of blood splatter expert Herbert L. MacDonnell. After the matter was fully briefed, on January 30, 2006, we issued an order directing a Daubert hearing on the admissibility of MacDonnell's testimony before this court. A hearing was held on the afternoon of March 16, 2006.¹ After the hearing both parties further briefed the matter and it is now ripe for our decision. For the following reasons we find that MacDonnell's proffered testimony is largely admissible under Daubert. However, we will preclude MacDonnell from testifying about his demonstrative of medium blunt force trauma overlaid onto human prints.

DISCUSSION:

I. RELEVANT LEGAL STANDARD

Federal Rule of Evidence 702 governs the admissibility of expert testimony. That rule establishes three distinct requirements for the admissibility of expert

¹At the hearing, plaintiff orally withdrew the remaining Daubert issues regarding plaintiff's motion to limit the testimony of John Hathaway Swan and the withdrawal of the motion was concurred in by defendants. (See Rec. Docs. No. 220 & 259.)

testimony: (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case. Fed. R. Evid. 702; see also Daubert v. Merrell Dow Pharms., 509 U.S. 579, 589-92 (1993). In Daubert, the Supreme Court held that it was the trial court's duty at the outset to act as the gatekeeper for the admissibility of scientific testimony before the jury. Daubert, 509 U.S. at 592-93, 597; see Oddi v. Ford Motor Co., 234 F.3d 136, 144 (3d Cir. 2000); see also Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137, 147 (1999) (extending Daubert to all expert testimony). Thus, when faced with proposed scientific expert testimony the court must determine whether (1) the proposed testimony involves scientific knowledge that (2) will assist the trier of fact to understand or determine a fact at issue. Daubert, 509 U.S. at 592; Oddi, 234 F.3d at 144. The Daubert Court emphasized that the district court's inquiry is to be a flexible one. Daubert, 509 U.S. at 594-95. The proponent of expert testimony bears the burden of establishing the reliability and admissibility of the expert's testimony by the preponderance of the evidence. Id. at 593 n.10; Oddi, 234 F.3d at 144.

II. MACDONNELL'S PROFFERED TESTIMONY

A. MacDonnell's Expert Qualifications

A court may qualify a witness as an expert based on his knowledge, skill, experience, training, or education. Fed. R. Evid. 702. In this case, neither the parties, nor the court, dispute that based on MacDonnell's professional and academic credentials, he qualifies as an expert in bloodstain pattern analysis and latent finger print identification.

B. Reliability of MacDonnell's Proffered Testimony

Rather, it is the second prong, the reliability of MacDonnell's proffered testimony as applied to the facts of this case, that is the subject of the parties' dispute. Daubert sets forth the following general, but not definitive, non-exclusive factors for a court to consider under the reliability prong: (1) whether a theory or technique that is part of the proffered testimony can be or has been scientifically tested, i.e., can a hypothesis be stated that can then be tested to ascertain its falsified; (2) whether the theory or technique has been subject to peer review and publication; (3) in the case of a particular scientific technique is there a known or potential rate of error; and (4) general acceptance in the scientific community. Daubert, 509 U.S. at 594. In addition to those factors enumerated in Daubert, the United States Court of Appeals for the Third Circuit continues to apply a series of factors it enumerated prior to the Daubert decision. Therefore, a district court in the Third Circuit should consider these factors:

Thus, the factors Daubert and Downing have already deemed important include: (1) whether a method consists of a testable hypothesis; (2) whether the method has been subject to peer review; (3) the known or potential rate of error; (4) the existence and maintenance of standards controlling the technique's operation; (5) whether the method is generally accepted; (6) the relationship of the technique to methods which have been established to be reliable; (7) the qualifications of the expert witness testifying based on the methodology; and (8) the non-judicial uses to which the method has been put.

In re Paoli R.R. Yard PCB Litigation, 35 F.3d 717, 742 n. 8 (3d Cir. 1994.)

Plaintiff asserts that MacDonnell's expert testimony should be barred for several reasons. First, plaintiff argues that MacDonnell's methodology lacks reliability. Second, Crawford contends that the equipment used by MacDonnell to simulate a medium velocity blunt force trauma was never sufficiently demonstrated to have been calibrated, standardized, verified or ensured reliable by other methods. Likewise, plaintiff asserts that there is no known error rate for MacDonnell's methodology of simulating medium velocity blunt force trauma blood splatter on a human palm print. Next, plaintiff notes that MacDonnell's methodology in determining that medium velocity blunt force trauma blood splatter could repose in the valleys of a human print and the results of the subject test have never been published and subject to peer review. Plaintiff also argues that MacDonnell's

methodology lacks general acceptance in the scientific community. Finally, Crawford contends that MacDonnell's methodology and results in simulating the medium velocity blunt force trauma blood splatter on a human print were the product of subjective observations and methodologies.

The defendants initially assert that the "experiment" conducted by MacDonnell was not conducted in order to create data, but rather was a demonstration of known scientific principles of which MacDonnell was already aware, i.e., the relative sizes of blood splatter created by medium velocity impact as compared to the width of valleys of a human print. Essentially, defendants contend that although comparing the size of the blood splatter on the latent print via MacDonnell's blood splatter "experiment" is uncommon, comparing two known measurements does not involve unproven scientific method.

We agree with the defendants that MacDonnell sufficiently established that his testimony will be based on comparing the sizes of two objects. At the hearing, MacDonnell testified and cited numerous publications, which state that the size of blood splatter from medium velocity impact is in the range of 1 to 3 mm in diameter. (Transcript of Mar. 16, 2006 Daubert Hearing, Rec. Doc. No. 275, at 40-42.) MacDonnell testified that he measured the spacing between ridges on

Crawford's print with a microscopic ruler as 0.53 mm. (Rec. Doc. No. 275, at 19.)² We agree with the central underpinning of the defendants argument.

MacDonnell's testimony will be based on the comparison of two sizes: (1) the range of sizes of microscopic blood splatter as generally accepted in the scientific community and (2) the size of the distance between the ridges of Crawford's print.

We are certain that MacDonnell's proffered testimony regarding the size of medium velocity blood splatter in comparison to the size of the distance between the ridges of Crawford's print would be helpful for the jury to determine how the blood and print were transferred to the automobile at the crime scene, i.e., there is sufficient "fit" for MacDonnell's testimony on blood splatter/finger ridge sizes to be presented to the jury under Federal Rule of Evidence 702. Therefore, we must turn to the reliability of MacDonnell's proffered testimony. We find that the expert qualifications of MacDonnell in the areas of blood splatter and finger print analysis and the wide publication of medium velocity blood splatter sizes along with his personal measurements of the space between the ridges on Crawford's print make

²MacDonnell also testified that the spacings between ridges in adult prints is fairly consistent at 19 ridges per centimeter which he said works out to roughly a distance of slightly less than .5 mm between ridges. (Rec. Doc. No. 275, at 12.)

his testimony regarding the two sizes reliable enough to be admissible for purposes of Daubert.

C. MacDonnell is Precluded From Presenting His Demonstrative of Medium Blunt Force Trauma Over His Own Handprint

We now turn to the issue of whether MacDonnell should be allowed to present his demonstration of the medium velocity blunt force trauma blood splatter as measured against his own print. For the following reasons we will preclude MacDonnell from presenting the demonstrative to the jury.

Defendants argue that the device MacDonnell used to create the medium force trauma has been widely used by blood splatter experts and that at the hearing there was testimony regarding how high-speed strobe photography measured the device at 25 feet per second, the speed of medium velocity impact.³ (Rec. Doc. No. 278, at 7-8.) The defendants also argue that it makes little difference that MacDonnell produced the blood splatter over his own hand print as he could have also easily produced the splatter on a blank piece of cardboard and compared it to

³The photograph of the calibration of the medium velocity device was done while MacDonnell was at Elmira College sometime between 1974 and 1982. (Rec. Doc. No. 275, at 71.)

the distance between ridges on Crawford's palm print. (Rec. Doc. No. 278, at 9.)

We find that defendants have failed to produce by the preponderance of the evidence that MacDonnell's demonstrative has sufficient indicia of reliability. First, we agree with plaintiff that there is an absence of evidence as to when the medium velocity blood splatter device was last calibrated; the photo offered by defendants is of a calibration dating from decades ago. Second, we find that use of MacDonnell's own print and the circumstances on the whole of how he created his demonstrative lack the controls necessary to ensure reliable results. Although MacDonnell used his own print, which is presumably within the average of adult size, a demonstrative of Crawford's own print would be less confusing and more helpful to a jury. Furthermore, the court is convinced that defendants failed to adequately demonstrate by a preponderance of the evidence that the demonstrative sufficiently captured the numerous factors at play at the scene of the crime, including the trajectory of the splatter, passage of time, climate, etc.. Because we cannot find by a preponderance of the evidence that MacDonnell's demonstrative offers sufficient indicia of reliability to be helpful to a jury, and because we find that the demonstrative might confuse a jury of the relevant issues we will preclude MacDonnell from testifying about the demonstrative.

NOW, THEREFORE, IT IS HEREBY ORDERED THAT:

1. Plaintiff's motion in limine to bar the expert testimony of Herbert L. MacDonnell is denied in part. (Rec. Doc. No. 218.)
2. MacDonnell will be allowed to testify about the relative sizes of medium blunt force trauma blood splatter and the size of the space between the ridges in Crawford's print.
3. MacDonnell will be precluded from testifying about his demonstrative of medium blunt force trauma blood spatter and his own print as we find defendants have failed to produce by the preponderance of the evidence that the methodology of the demonstrative has sufficient indicia of reliability and we find that the nature of the demonstrative could confuse the jury.

s/ James F. McClure, Jr.
James F. McClure, Jr.
United States District Judge